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(54) **Optical vestigial sideband transmitter/receiver**

(57) An optical vestigial sideband transmitter includes first and second intensity-modulated light sources and a pair of optical splitters. A first and second wavelength combiner receives a portion of the outputs of the first and second intensity-modulated light sources. The first wavelength combiner filters the two modulated signals to generate two vestigial sideband signals and multiplexes them onto a single waveguide such as an optical fiber for output to an optical transmission medium.

The second wavelength combiner operates in conjunction with the first wavelength combiner to automatically and precisely regulate the optical wavelengths of the light sources, such that the passband of the first wavelength combiner substantially suppresses the redundant sideband from each modulated signal. After transmission, a vestigial sideband receiver including a wavelength splitter and optical-to-electrical receivers extracts the multiplicity of vestigial sideband signals placing them on separate optical waveguides.

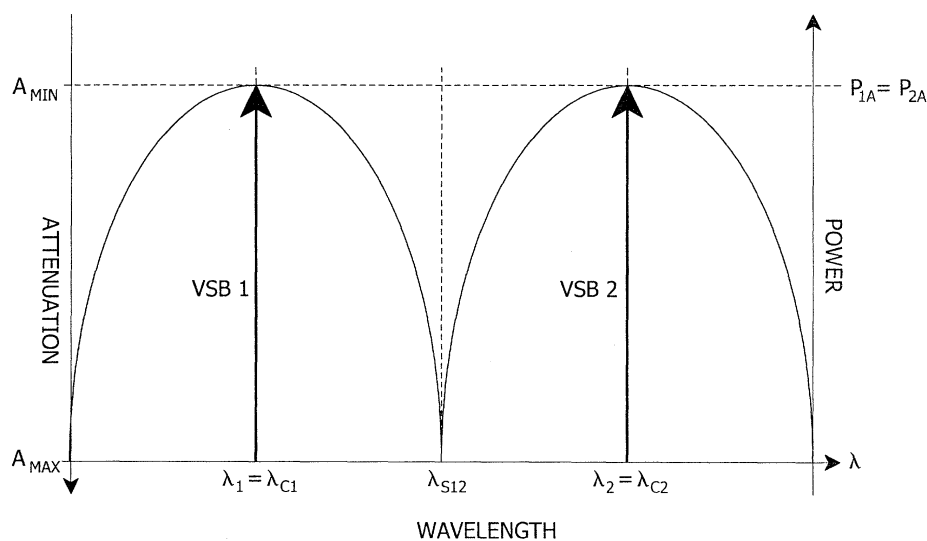


FIG. 1



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EUROPEAN SEARCH REPORT

Application Number
EP 03 01 2863

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Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.7)
Y	WO 97/49248 A (FIBER OPTIC NETWORK SYSTEMS CORP) 24 December 1997 (1997-12-24) * page 18, line 15 - line 24; figures 2A, 20A, 21 * * page 37, line 8 - page 38, line 20 * -----	1-4	H04B10/155
Y	EP 0 715 191 A (AT&T CORP) 5 June 1996 (1996-06-05) * column 1, line 42 - column 2, line 39; figures 1-4 * -----	1-4	
A	US 6 118 562 A (LEE ET AL) 12 September 2000 (2000-09-12) * abstract * -----	1-4	
			TECHNICAL FIELDS SEARCHED (Int.Cl.7)
			H04B
The present search report has been drawn up for all claims			
Place of search Munich		Date of completion of the search 15 June 2005	Examiner Shaan, M
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document			

4
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**ANNEX TO THE EUROPEAN SEARCH REPORT
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